

COP 4610L: Applications in the Enterprise Spring 2005

Introduction to PHP – Part 3

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Dynamic Content in PHP

- Of all the strengths PHP exhibits as a server-side scripting language, perhaps its greatest strength lies in its ability to dynamically change XHTML output based on user input.
- In this final section of notes, we'll build on the examples we've constructed in the previous two sets of notes by combining `form.html` and `form.php` into one dynamic PHP document named `dynamicForm2.php`.
- We'll add error checking to the user input fields and inform the user of invalid entries on the form itself, rather than on an error page. If an error exists, the script maintains the previously submitted values in each form element.
- Finally, after the form has been successfully completed, we'll store the input from the user in a MySQL database.



Sample form to take user input in XHTML - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Refresh Mail Print

Address http://localhost:8080/dynamicForm2.php Go Links

This is a sample registration form.

Please fill in all fields and click Register.

User Information

Please fill out the fields below.

First Name Mark

Last Name Llewellyn

Email markl@cs.ucf.edu

Phone (407)823-2790

Must be in the form (555)555-5555

Publications

Which magazine would you like information about?

Pro Cycling

Operating System

Which operating system are you currently using?

Windows XP Windows 2000 Windows 98

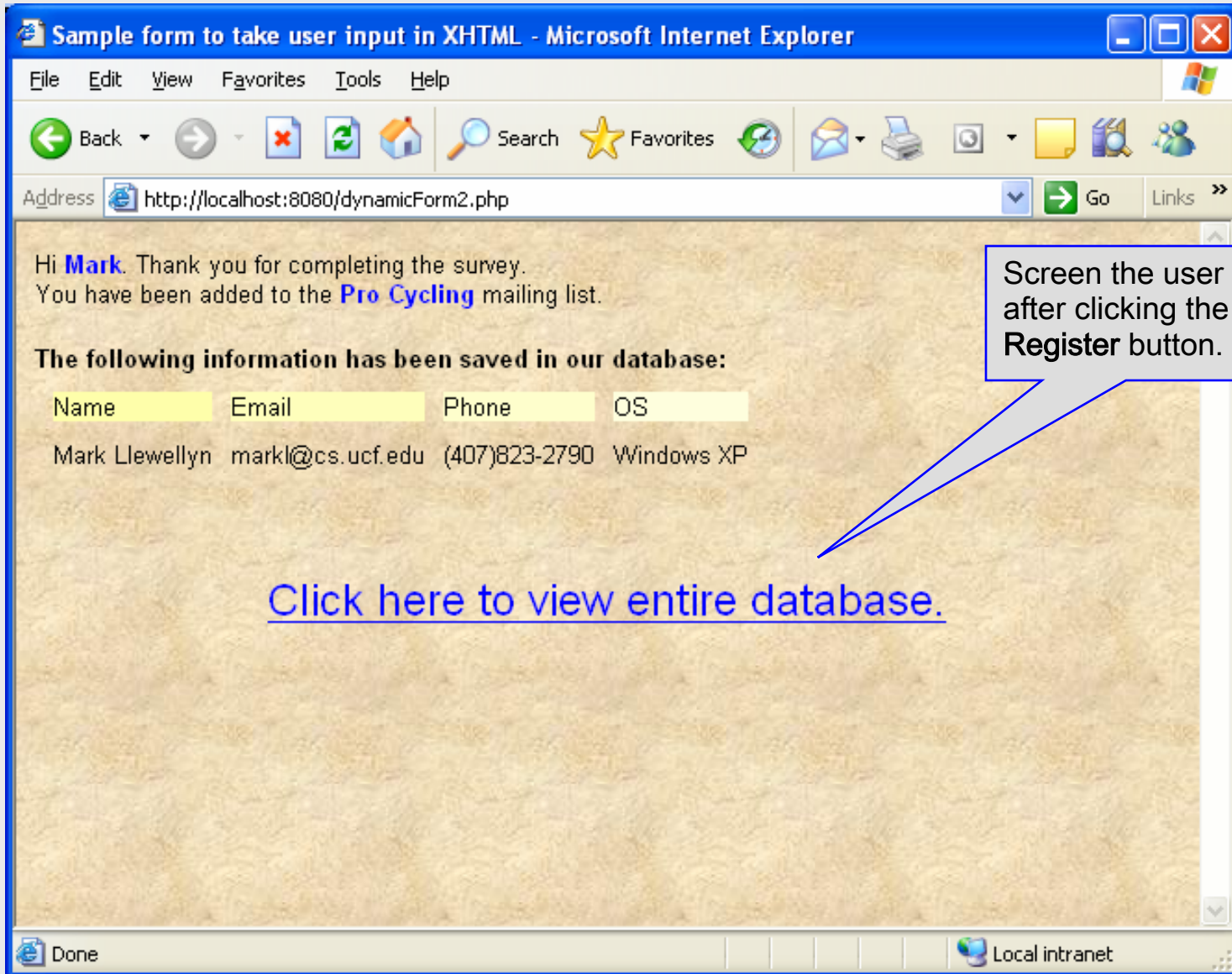
Linux Other

Register

Done Local intranet

Basically, the same registration form that was used in a previous example.





Database Search Results - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Stop

Address <http://localhost:8080/formDatabase2.php>

Mailing List Contacts

ID	Last Name	First Name	E-mail Address	Phone Number	Magazine	Operating System
12	Schumacher	Ralf	ralf@toyota.com	(222)222-222	Cycling Weekly	Other
11	Thurau	Didi	agirl.de	(456)123-334	Mirror du Cyclisme	Windows 98
10	Jolie	Angelina	hollywood.com	(123)456-789	Velo-News	Windows XP
9	Schumacher	Michael	michael@ferrari.it	(407)823-279	RadSport	Windows 2000
13	Campbell	Kristy	im_not_sure	(345)987-654	Cycle Sport	Windows 2000
14	Einstein	Albert	relative	(111)222-333	Cycling Weekly	Other
16	Llewellyn	Mark	markl@cs.ucf.edu	(407)823-279	Pro Cycling	Windows XP

Done Local intranet

Screen the user sees after clicking to see the entire database.



Sample form to take user input in XHTML - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media

Address http://localhost:8080/dynamicform2.php Go Links

This is a sample registration form.

Please fill in all fields and click Register.
Fields with * need to be filled in properly.

User Information
Please fill out the fields below.

First Name *

Last Name No First Name

Email l_forgot.com

Phone (234)343-5544
Must be in the form (555)555-5555

Publications
Which magazine would you like information about?
RadSport

Operating System
Which operating system are you currently using?
 Windows XP Windows 2000 Windows 98
 Linux Other

Register

Done Local intranet

Dynamic nature of the PHP form is illustrated when the user fails to enter proper information into the form. In this case, the user forgot to enter their first name. Error checking is in place on each user input location and the page is dynamically updated to reflect the error processing and correction capabilities. The database will not be updated until the user has correctly filled in all required fields.



MySQL Query Browser - root@localhost:3306 / MailingList

File Edit View Query Script Tools Help

Go back Next Refresh `SELECT * FROM `contacts` `c`` Execute Stop

Transaction Explain Compare SELECT FROM WHERE GROUP HAVING ORDER SET CREATE

Resultset 1

ID	LastName	FirstName	Email	Phone	Magazine	OS
12	Schumacher	Ralf	ralf@toyota.com	(222)222-222	Cycling Weekly	Other
11	Thurau	Didi	agirl.de	(456)123-334	Mirror du Cyclisme	Windows 98
10	Jolie	Angelina	hollywood.com	(123)456-789	Velo-News	Windows XP
9	Schumacher	Michael	michael@ferrari.it	(407)823-279	RadSport	Windows 2000
13	Campbell	Kristy	im_not_sure	(345)987-654	Cycle Sport	Windows 2000
14	Einstein	Albert	relative	(111)222-333	Cycling Weekly	Other
16	Llewellyn	Mark	markl@cs.ucf.edu	(407)823-279	Pro Cycling	Windows XP

Schemata Bookmarks History

- bikedb
 - bikes
 - bluebikes
- coloursurvey
- guestbook
 - guests
- imagedb

Syntax Functions Params Trx

- Data Manipulation
- Data Definition
- MySQL Utility
- Transactional and Locking

7 rows fetched in 0.0057s (0.0006s) Edit Apply Changes

1: 1

Screen shot from MySQL of the contacts relation after the inclusion of several users. Note that the values in the table are the same as those returned to the PHP document in the previous slide.



```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

```
<!-- dynamicForm2.php -->
```

```
<html xmlns = "http://www.w3.org/1999/xhtml">  
  <head>  
    <title>Sample form to take user input in XHTML</title>  
  </head>  
  <body style = "font-family: arial, sans-serif; background-color: #856363" background=image1.jpg>  
    <?php  
      extract ( $_POST );  
      $iserror = false;  
      // array of magazine titles  
      $maglist = array( "Velo-News",  
        "Cycling Weekly",  
        "Pro Cycling",  
        "Cycle Sport",  
        "RadSport",  
        "Mirror du Cyclisme" );  
      // array of possible operating systems  
      $systemlist = array( "Windows XP",  
        "Windows 2000",  
        "Windows 98",  
        "Linux",  
        "Other");
```




```
// array of name and alt values for the text input fields
$inputlist = array( "fname" => "First Name",
    "lname" => "Last Name",
    "email" => "Email",
    "phone" => "Phone" );
if ( isset ( $submit ) ) {
    if ( $fname == "" ) {
        $formerrors[ "fnameerror" ] = true;
        $iserror = true;
    }
    if ( $lname == "" ) {
        $formerrors[ "lnameerror" ] = true;
        $iserror = true;
    }
    if ( $email == "" ) {
        $formerrors[ "emailerror" ] = true;
        $iserror = true;
    }
    if ( !ereg( "^\([0-9]{3}\)[0-9]{3}-[0-9]{4}$", $phone ) ) {
        $formerrors[ "phoneerror" ] = true;
        $iserror = true;
    }
    if ( !$iserror ) {
        // build INSERT query
        $query = "INSERT INTO contacts " .
            "( LastName, FirstName, Email, Phone, Magazine, OS ) " .
            "VALUES ( '$lname', '$fname', '$email', " .
            " . "" . quotemeta( $phone ) . "", '$mag', '$os' )";
    }
}
```



```
// Connect to MySQL
if ( !( $database = mysql_connect( "localhost",
    "root", "root" ) ) )
    die( "Could not connect to database" );

// open MailingList database
if ( !mysql_select_db( "MailingList", $database ) )
    die( "Could not open MailingList database" );

// execute query in MailingList database
if ( !( $result = mysql_query( $query, $database ) ) ) {
    print( "Could not execute query! <br />" );
    die( mysql_error() );
}
print( "<p>Hi
    <span style = 'color: blue'> <strong>$fname</strong></span>.
    Thank you for completing the survey.<br />
    You have been added to the <span style = 'color: blue'>
    <strong>$mag</strong></span> mailing list.          </p>
    <strong>The following information has been saved in our database:</strong><br />

    <table border = '0' cellpadding = '0' cellspacing = '10'>
    <tr>
    <td bgcolor = '#ffffaa'>Name </td>
    <td bgcolor = '#ffffbb'>Email</td>
    <td bgcolor = '#ffffcc'>Phone</td>
    <td bgcolor = '#ffffdd'>OS</td>
    </tr>
    <tr>
```



```

<!-- print each form field's value -->
<td>$fname $lname</td>
<td>$email</td>
<td>$phone</td>
<td>$os</td>
</tr></table>
<br /><br /><br />
<div style = 'font-size : 10pt; text-align: center'>
    <div style = 'font-size : 18pt'>
        <a href = 'formDatabase2.php'>
            Click here to view entire database.</a>
        </div>
    </div></body></html>" );
die();
}
}
print( "<h1>This is a sample registration form.</h1>
Please fill in all fields and click Register." );
if ( $iserror ) {
    print( "<br /><span style = 'color : red'>
        Fields with * need to be filled in properly.</span>" );
}
print( "<!-- post form data to dynamicForm2.php -->
<form method = 'post' action = 'dynamicForm2.php'>
<img src = 'images/user.gif' alt = 'User' /><br />
<span style = 'color: blue'>
Please fill out the fields below.<br />
</span>

```

Invoke PHP script to see contents of entire database if user clicks this link. Code begins on page 14.

The form created is self-submitting (i.e., it posts to itself). This is done by setting the action to dynamicForm2.php



```

<!-- create four text boxes for user input -->" );
foreach ( $inputlist as $inputname => $inputalt ) {
    $inputtext = $inputvalues[ $inputname ];

    print( "<img src = 'images/$inputname.gif'
        alt = '$inputalt' /><input type = 'text' name = '$inputname' value = '' . $$inputname . '' />" );
    if ( $formerrors[ ( $inputname )."error" ] == true )
        print( "<span style = 'color : red'>*</span>" );
    print( "<br />" );
}
print( "<span style = 'font-size : 10pt'" );
if ( $formerrors[ "phoneerror" ] ) print( "; color : red" );
print( "">Must be in the form (555)555-5555
    </span><br /><br />
    <img src = 'images/downloads.gif'
    alt = 'Publications' /><br />
    <span style = 'color: blue'>
    Which magazine would you like information about?
    </span><br />
    <!-- create drop-down list containing magazine names -->
    <select name = 'mag'>" );
foreach ( $maglist as $currmag ) {
    print( "<option" );
    if ( ( $currmag == $mag ) )
        print( " selected = 'true'" );
    print( ">$currmag</option>" );
}

```

The \$\$variable notation specifies variable variables. PHP permits the use of variable variables to allow developers to reference variables dynamically. The expression \$\$variable could also be written as \${\$variable} for added clarity.



```
print( "</select><br /><br />
<img src = 'images/os.gif' alt = 'Operating System' />
<br /><span style = 'color: blue'>
Which operating system are you currently using?
<br /></span>

<!-- create five radio buttons -->" );

$counter = 0;

foreach ( $systemlist as $currssystem ) {
    print( "<input type = 'radio' name = 'os'
        value = '$currssystem'" );

    if ( $currssystem == $os ) print( "checked = 'checked'" );
    if ( iserror && $counter == 0 ) print( "checked = 'checked'" );

    print( " />$currssystem" );

    if ( $counter == 2 ) print( "<br />" );
    $counter++;
}

print( "<!-- create a submit button -->
<br />
<input type = 'submit' name = 'submit' value = 'Register' />
</form></body></html>" );
?>
```



```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<!-- formDatabase2.php -->
<!-- Program to query a database and send results to the client. -->

<html xmlns = "http://www.w3.org/1999/xhtml">
  <head>   <title>Database Search Results</title>  </head>
  <body style = "font-family: arial, sans-serif"
    style = "background-color: #F0E68C" background=image1.jpg>
    <?php
      extract( $_POST );
      // build SELECT query
      $query = "SELECT * FROM contacts";
      // Connect to MySQL
      if ( !( $database = mysqli_connect( "localhost", "root", "root", MailingList ) ) )
        die( "Could not connect to database" );
      // query MailingList database
      if ( !( $result = mysqli_query( $database, $query ) ) ) {
        print( "Could not execute query! <br />" );
        die( mysqli_error() );
      }
    ?>
    <h3 style = "color: blue">
    Mailing List Contacts</h3>
```



```
<table border = "1" cellpadding = "3" cellspacing = "2"
style = "background-color: #ADD8E6">
<tr>
  <td>ID</td>
  <td>Last Name</td>
  <td>First Name</td>
  <td>E-mail Address</td>
  <td>Phone Number</td>
  <td>Magazine</td>
  <td>Operating System</td>
</tr>
<?php
// fetch each record in result set
for ( $counter = 0;
  $row = mysqli_fetch_row( $result );
  $counter++ ){
  // build table to display results
  print( "<tr>" );
  foreach ( $row as $key => $value )
    print( "<td>$value</td>" );
  print( "</tr>" );
}
mysqli_close( $database );
?>

</table>
</body>
</html>
```



MySQL Table Editor

Table Name: Database: Comment:

Columns and Indices | Table Options | Advanced Options

Column Name	Datatype	NOT NULL	AUTO INC	Flags	Default Value	Comment
ID	INTEGER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> UNSIGNED <input type="checkbox"/> ZEROFILL		
LastName	VARCHAR(30)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> BINARY		
FirstName	VARCHAR(30)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> BINARY		
Email	VARCHAR(30)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> BINARY		
Phone	VARCHAR(12)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> BINARY		
Magazine	VARCHAR(60)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> BINARY		
OS	VARCHAR(30)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> BINARY		

Indices | Foreign Keys | Column Details

PRIMARY

Index Settings

Index Name:

Index Kind:

Index Type:

Index Columns (Use Drag'n'Drop)

ID

Apply Changes | Discard Changes | Close

Schema of the MailingList database table contacts required for the PHP database example to work.

